

end than the other; the inner border gently convex and entire; the outer border is marked by six shallow notches, which are separated by as many sharp compressed projections. The emarginations and denticles are the termini of corresponding grooves and ridges, which radiate from a smooth space along the inner margin of the crown. From this plane the grooves gradually deepen to the margin; the separating ridges are acute, and without irregularity or serration. The base or root of the tooth is quite wide; externally it extends beyond the border of the crown at the notches, and has projections corresponding to the denticles, from which it is separated by a horizontal notch. On the inner side the base extends like a shelf beyond the posterior half of the crown, and is produced backwards beyond its posterior border. The inferior plane is concave in transverse section; the crown is plane in all directions.

	metre.
Length of crown preserved	·021
Width of crown	·013
Length of root preserved	·022
Depth of tooth internally	·005
„ externally	·003

This *Ceratodus* resembles the species described by Agassiz under the names of *C. parvus* and *C. serratus* from the English Trias, but differs from them in the shortness of the tooth-like processes. In none of the described species do I find such a development of the basis on the inner side.

This species is of interest as introducing the genus to North America. It is dedicated to Dr. Winslow, to whom we are indebted for its discovery.—*Proc. Acad. Nat. Sci. Philadelphia*, September 28, 1875.

Formation of Nitrites by Bacteria.

The presence of nitrites in spring-waters, which has usually been ascribed to the oxidation of ammonia therein, is now stated by Mensel to be produced by the reduction of nitrates by the agency of *Bacteria*. In proof of this he shows:—that such water which contained *Bacteria* and nitrates, but neither ammonia nor nitrites, gave after standing four days the reactions of nitrous acid; that antiseptics, such as salicylic acid, phenol, benzoic acid, alum, and much salt even, prevent or hinder the production of nitrites; that aqueduct-water containing pure nitrates, which alone does not show the production of nitrites even in presence of *Bacteria*, has this change effected upon the addition of glucose, gum, dextrin, cellulose, starch, &c., in the course of from two to fourteen days; that freshly distilled water, boiled with glucose and nitre, shows no nitrites even after standing for weeks, because *Bacteria* are absent; and that putrefying albuminates reduce nitrates to nitrites. The decomposition of cellulose by *Bacteria* in presence of nitrates proves that nitre is not only direct food for plants, but that it also performs by its oxygen an important function in the soil. The author believes that these facts have important bearings in agriculture and in medicine.—*Silliman's American Journal*, January 1876.